



Published weekly for employees of Lawrence Livermore National Laboratory

Friday, October 31, 2003

Vol. 28, No. 44

Diagnostic kit uses Lab technology

A Hawaii-based company has started producing chemical diagnostic kits, based on a Laboratory technology that permits the U.S. military to check the safety of munitions.

The kits, known as field-portable thin-layer chromatography (TLC) units, are produced by Ho'olana Technologies of Hilo, Hawaii.

Technology for the TLC kits was developed by researchers in LLNL's Forensic Science Center and licensed in July 2001 by Alu Like Enterprises LLC to be manufactured by its subsidiary, Ho'olana Technologies LLC.

The new kits analyze for the presence and quantity of stabilizers in propellant mixtures found in munitions, thus ensuring munitions are safe for handling and storage.



JACQUELINE MCBRIDE/NEWSLINE

Rich Whipple displays the elements of the Lab-developed chemical diagnostic kit now being produced in Hawaii.

See **DIAGNOSTIC**, page 4

Tarter elected AAAS fellow for his many contributions to post-Cold War security

Former Laboratory Director Bruce Tarter has been elected to the rank of Fellow of the American Association of the Advancement of Science.

Tarter is being honored for his "distinguished leadership of Lawrence Livermore National Laboratory in transforming the science base for post-Cold War national security and for sustained contributions to national science policy," according to the award citation.



Bruce Tarter

Alan Leshner, chief executive officer of AAAS and the executive publisher of Science magazine, called the award "a well-deserved recognition" for Tarter's accomplishments.

See **TARTER**, page 7

Monday commemoration will celebrate Dr. Edward Teller's life and achievements

A special commemoration honoring the late Dr. Edward Teller will be held at 2 p.m. Monday, in the Bldg 123 auditorium. George Shultz, secretary of state during the Reagan administration and a longtime colleague and friend of Teller's, will be the keynote speaker.

The Laboratory, the Hoover Institution at Stanford University and the University of California are sponsoring the event.

Teller, who dedicated his life to science, education, the Laboratory and national security,

See **TELLER**, page 7

Lab, Air Force fellowship takes wing

Starting next year, Air Force officers will participate in a highly selective joint Laboratory-UC Davis program that combines defense-related professional military education and advanced degrees accredited by the University of California.

"A major benefit for participants in this Air Force-National Laboratory Technical Fellowship Program will be learning directly from this Laboratory's scientific leaders in nuclear-weapons technology," said Laboratory Director Michael Anastasio.

On Thursday, Air Force Brig. Gen. Robert L. Smolen signed a Memorandum of Understanding (MOU) with Anastasio. Smolen is director of Nuclear and Counterproliferation, in the Office of the Deputy Chief of Staff for Air and Space Operations, at U.S. Air Force Headquarters in Washington, D.C.

The details of the MOU create the Air Force-National Laboratory Technical Fel-

See **MOU**, page 8

UC president and vice president to address Laboratory employees

UC President Robert Dynes and Adm. Robert Foley, the newly named UC vice president of Laboratory Management, will hold an all-hands meeting at the Laboratory Monday.

Dynes and Foley will address employees at 9:30 a.m. in the Bldg. 123 auditorium. They will respond

to questions submitted in advance by Lab employees as well as take questions following their presentation. Attendance is by invitation from directorate offices — each directorate has been allocated a limited number of seats. The talk will be broadcast live on Lab TV Channel 2.



HOME campaign starts with a bang

Alameda County Supervisor Scott Hagerty starts the Run for HOME Wednesday. The run and fair officially kicks off the 2003 HOME Campaign, which will continue through November. See page 5 for additional coverage.

JACQUELINE MCBRIDE/NEWSLINE



Lab firefighters help battle wildfires — Page 2



Sounding out extraterrestrial intelligence — Page 5



The vampires of the insect world — Page 8



LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4

Friday
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The Benefits Office will continue the brown-bag series on how to enhance your financial security by participating in the **Tax-Deferred 403(b)**. The final presentation for 2003 will be held from 12:15 – 1:15 p.m. today in Bldg. 571, conference room 2301. Presentations will resume in January 2004 on the last working day of each month (excluding November and December). Attendance is open and no pre-registration is required. Bring your lunch and your questions. For additional information about benefit services or events, see the Website at www.llnl.gov/llnl/02employment/benefits/benefits.htm.

Saturday
1

The **2nd Annual Downtown Livermore Art Walk** is today from 11 a.m. to 5 p.m. Fifty downtown businesses will host 100 artists presenting the best original fine art in the Tri-Valley. Walking maps are available at U.S. Bank, LAA Gallery, Panama Bay, Oddfellows Hall, Chamber of Commerce, Way Up Art & Frame. Art Walk is produced by the TriValley Artists Guild in association with Livermore Art Association, City of Livermore, ArtSpace Livermore, Livermore Downtown, and support from sponsors and volunteers.

Monday
3

B Division's fall book sale returns today through Friday, 11:30 a.m. to 1:30 p.m., in Bldg. 132, room 1200 (Q- or L-cleared access only). This year there are a lot of old books, current hardback fiction, and science fiction, plus the usual selection of fiction and non-fiction. All proceeds are used to buy Christmas gifts for needy children. Each year the sales help agencies in Alameda, Contra Costa and San Joaquin counties, plus individual families in need. For more information, call Lynn Groves, 2-1684.

Tuesday
4

A **Fidelity retirement counselor** will be available today and Wednesday to assist with assessing the current state of retirement accounts, learning how to diversify, planning asset allocation, and identifying income strategies. Fidelity Investments Mutual Funds are available to UC's workplace retirement plan participants in addition to the UC-managed investments pools. To set up a one-on-one consultation with a Fidelity representative, call 800-642-7131. When calling, be sure to specify that you are an LLNL employee.

...

Health Services continues to offer **free flu vaccines** this week through its walk-in clinics today through Thursday as well as Nov. 11-13, from 1-4 p.m. Please note that contractors and retirees are not eligible for flu shots this year; unless the retirees are currently working at LLNL. For more information, call 3-8703.

Lab Fire helps battle California wildfires



JACQUELINE MCBRIDE/NEWSLINE

Members of the Laboratory's fire department participate in an emergency response exercise. Lab firefighters have been deployed to battle Southern California wildfires.

Laboratory firefighters were on the front lines of wildfires raging throughout Southern California this week. Last weekend the Lab dispatched two engines along with two strike teams to provide assistance, one crew to fight the fires near San Dimas, the other to battle the inferno raging throughout San Diego County.

"If I could send another strike team, I would," Lab Fire Chief Randy Bradley said. "This is what these guys train for. When there is a big fire, they want to help."

In all, the Laboratory dispatched 21 engines and more than 70 firefighters from fire districts throughout in Alameda County, as part of its mutual aid agreement to handle dispatch for the county.

Though Bradley is looking to provide all the help the county can spare, he emphasized the assistance does not jeopardize the county's own ability to combat fire.

"We have good coverage for our county,"

Bradley said. "If we did not have such a high fire danger up here, then I could send another strike team."

The Lab and Alameda County were approached by the state Office of Emergency Services last weekend on the possibility of providing assistance for the Southern California wildfires. Bradley then worked with the fire chiefs throughout the county to provide the most assistance possible, while still maintaining adequate protection throughout Alameda County.

Bradley says when a major fire arises, he has no problem finding teams willing to respond. "They argue over who gets to go," he said of the firefighters. "They want to be out there fighting."

The Laboratory firefighters, eight in all, may remain in Southern California for up to seven days. Bradley said he would assess whether the firefighters will need additional Alameda County resources in the next few days.

Self-help evacuation drill planned for mid-November

During the week of Nov. 17, the Emergency Management Division will conduct a site-wide "self-help" evacuation drill.

The drill is designed to ensure employees at both the Livermore site and Site 300 demonstrate knowledge of their local evacuation and muster procedures. The drill will only consist of facility evacuation, muster and reporting. There will be no facility re-entry, no facility sweeps and no mock injured to locate or treat. Reporting will occur through the established zone system to the Emergency Operations Center (EOC) utilizing the ARES (RACES) radio net.

Limited area facilities with alarmed doors that would be crashed out in an emergency situation should talk with their security representative to obtain information on monitoring and re-sealing

Brighter Holidays accepting family sponsorship requests

Brighter Holidays has already received requests to sponsor needy families for the holidays and a list is being assembled of families who are requesting assistance.

Last year, Laboratory employees provided 115 families in nine counties with gifts and food they otherwise would not have had.

If you or your group is interested in sponsoring a family, call Betty Klino, 3-0642. If you have questions regarding Brighter Holidays, call Joana Stadler, 2-7985, or Karen Rosenberg, 2-8551. Look for additional information in upcoming issues of *NewsOnline* and *Newsline*.

doors crashed during the drill. The Safeguards and Security Department must receive Security Certification forms and sealer requests by Nov. 7, one week prior to the drill date.

Employees should contact their directorate self-help coordinators for local information on evacuation procedures and assembly points. For further information, contact Sue Broadway, LLNL Self-Help coordinator, 4-3759.

Newsline

Newsline is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

Contacts:

Media & Communications manager: Lynda Seaver, 3-3103

Newsline editor: Don Johnston, 3-4902

Contributing writers: Bob Hirschfeld, 2-2379; David Schwoegler, 2-6900; Anne M. Stark, 2-9799; Stephen Wampler, 3-3107; Gordon Yano, 3-3117. For an extended list of Lab beats and contacts, see <http://www.llnl.gov/llnl/06news/NewsMedia/contact.html>

Photographer: Jacqueline McBride

Designer: Julie Korhummel, 2-9709

Distribution: Mail Services at LLNL

Public Affairs Office: L-797 (Trailer 6527), LLNL, P.O. Box 808, Livermore, CA 94551-0808

Telephone: (925) 422-4599; Fax: (925) 422-9291

e-mail: newsline@llnl.gov or newsonline@llnl.gov

Web site: <http://www.llnl.gov/PAO/>

AROUND THE LAB



Listening to the sounds of the universe

By Bob Hirschfeld

NEWSLINE STAFF WRITER

Kent Cullers is looking across the universe for a sign of intelligent life.

As director of research and development for the SETI Institute in Mountain View, he conducts his work without using his eyes. The search for extraterrestrial intelligence depends on the huge "ear" of the 1,000-foot Aricebo Radio Telescope in Puerto Rico.

Besides, Cullers is blind.

Relying on Braille and a special computer with text-to-speech capabilities, Cullers discussed his work in the Bldg. 123 auditorium last week, as part of the Diversity Speaker Series in honor of Disabilities Awareness Week.

His work would be a lot more difficult without computers, he said. "Those of us who are disabled, and those of us who simply need assistance of various kinds, are going to get it from computing machines, because they are increasing in power by a factor of 10 every five years," he said.

Computers are also a key to listening to the sounds of the universe. Although the human ear can hear many of the sounds picked up by radio telescopes, only computers can successfully filter out the extraneous sounds emitted by earthly interference.

The universe itself is noisy.

Holding up a portable audiocassette unit, Cullers played a sample of regular clicking sounds recorded by a radio telescope. When first detected, astrophysicists were amazed by the precision of the clicks. They were so regular and constant that experts decided they must be created by intelligent life, and nicknamed them LGM, for "little green men."

Subsequent research revealed that the sounds came from a pulsar, a collapsing neutron star that was emitting vast amounts of energy as it spun rapidly, each revolution monitored on Earth as a clicking sound.



JACQUELINE MCBRIDE/NEWSLINE

The SETI Institute's Kent Cullers held an audiocassette player up to the microphone so his audience could hear the clicking sounds emitted by a collapsing pulsar. Cullers, who is blind, believes humans will eventually detect intelligent life elsewhere in the universe, because "we are not a cosmic miracle."

According to Cullers, "SETI is the search for radiation in the electromagnetic spectrum. We seek signs, not of intelligence; I wish we were clever enough to know what intelligence is. We seek signs of technology."

But the search goes even beyond just technology, Cullers said. "Basically, the thinking of the SETI community is not to look for a twin of earth, but for a civilization into which we might evolve."

Cullers is concentrating on sounds in the frequency range of 1-3 gigahertz, which he calls the Cosmic Quiet Zone. "You get a better signal-to-noise ratio in that range, 'more bang for the buck'," he explained.

Astronomers have detected numerous other planet systems throughout our galaxy. And although he won't take odds on a discovery any day soon, he said: "My guess is chemistry and intelligence dominate. And if you have an earth-like planet, you get intelligent creepy-crawly creatures. But you know, that, and \$2 will buy you a cappuccino. That's not science. That's just my opinion."

So far, the SETI project has examined a few hundred sun-like stars out to distances of about 100 light years, without detecting any signs of intelligent life. But Cullers is optimistic. "Why? Because the probability is that we are not a cosmic miracle," he said.

When he's not listening to space, Cullers stays busy at other related work. He is assisting NASA with the development of an improved Braille system that accommodates mathematical equations, as well as graphics.

He also has movie credits, helping to write parts of the screenplay of the 1997 film "Contact," the Carl Sagan novel in which Earth receives signals from an intelligent extraterrestrial source.

One of the characters, a blind astrophysicist, is based on Cullers, and in fact, he passed an early screen test to play himself in the movie. "But," he said, "the next day, the director got fired and someone else got the part."

In early versions of the screenplay, his character was actually named Kent Cullers, but it was later changed to Kent Clark, "resulting in an awful lot of Superman jokes," he recalled.

According to Cullers: "It was a good movie about how contact might happen. On the other hand, if you think that you're going to pass through wormholes to go see dad, which was sort of the end of the movie, you'll have to wait for a kind of science that's beyond the physics that I understand."

BRIEFLY

Native American History Month speaker

James H. May of California State University, Monterey will speak at 11 a.m. Wednesday, Nov. 5, in the Bldg. 361 auditorium in honor of Native American History Month.

May served as the university's founding dean of Science, Technology and Information Resources from 1994 until his retirement in 2000. He was the recipient of the year 2000 Ely S. Parker Medal, the American Indian Science and Engineering Society's highest award. Though he retired, May retains his status as professor of Information Technology and Communication Design.

May, who holds a doctorate from Columbia University in library and information science, also served as the first community technology coordinator for the Smithsonian Institution, National Museum of the American Indian from 2000-2002.

One of his latest publications is "Information Technology for Indigenous People" in *Digital Democracy*, published by Oxford University Press in 1998.

IPAC offers redesigned Website

The Industrial Partnerships and Commercialization (IPAC) office has redesigned its Web-

site to provide updated news and information about new and existing technologies.

For convenience, IPAC has listed current "Featured Technologies" under the technologies menu to highlight the many new and diverse technologies now available for licensing and partnering. Also available is the "Portfolio & Profiles" section highlighting many of the Lab's existing technologies and capabilities, most of which are still available for licensing and partnering.

New to the Website is a section listing LLNL's more than 800 issued patents. The records are broken up into five-year increments for easier searching and viewing.

In addition, IPAC provides information about the available software code developed here at LLNL. Some code is free while other packages require a fee-based license to use. The software Website provides more information and a complete list of free software. <http://www.llnl.gov/IPandC/news/events/newsite.php>

Archives & Research Center open house

The Laboratory's newly refurbished Archives and Research Center (ARC) holds many treasures from the Lab's past — photographs, documents, videos, and artifacts.

Lab staff is invited to an ARC Open House Tuesday, Nov. 18, from 2-5 p.m. in Bldg. 439 to see some of these materials. Visitors will view exhibits of historical Labora-

tory photographs, documents, and artifacts and watch historical Laboratory videos. There are many items in the archives like a "red rock," photographs and other artifacts that are unidentified and will be on display. Archives staff would like employee help in identifying these objects and will award a special prize to the first person that can identify the "red rock."

There will be a drawing for a copy of a 1960 site aerial photograph. Archives and Records staff will be on hand to answer questions about records issues and talk to visitors about their needs and suggestions for the archives.

The archives are located in the west end of Bldg. 439 on South Gate Drive. Parking is available at the corner of South Gate Drive and West Inner Loop or along South Outer Loop. South Gate Drive is closed to traffic in front of the archives building. The archives are normally a Q only area but special arrangements have been made during the open house to allow access to all clearance levels. Foreign nationals must get approval to visit the archives from their hosts through the Safeguards and Security Foreign Interactions Office. Foreign Nationals will need to bring a printout of the one-day building access approval.

For further information, contact Maxine Trost, 2-6539; trost5@llnl.gov.



NEWS YOU CAN USE



JACQUELINE MCBRIDE/NEWSLINE

Research fellows poster science

UC Berkeley grad student Ryan McWilliams shows off his poster, “Observations of Recovered Diamond Anvil Cell Targets,” to other students and employees during the Student Employee Graduate Research Fellowship Program (SEGRF) poster presentation held last week. McWilliams is working in the Physics and Advanced Technologies Directorate.

DIAGNOSTIC

Continued from page 1

Stabilizers normally comprise 2 percent to 5 percent of the propellant mixture found in munitions. As the propellant ages, the stabilizer — that protects against the propellant undergoing accidental rapid decomposition or burn — is slowly consumed until its ability to stabilize is severely reduced. At this point, the propellant is said to be past its useful life and must be destroyed.

Propellant stabilizers are used in artillery shells, mortars, missile warheads and bombs.

Former Laboratory employee Jeff Haas led Livermore researchers at the Forensic Science Center who developed the TLC technology. They included analytical chemists Jeanne Bazan, Greg Klunder, Pete Nunes and Rich Whipple.

The test kits manufactured by the Hawaiian

firm, Ho’olana Technologies, contain all components necessary to perform thin layer chromatography in the field.

The kits include miniaturized lab equipment for use in the field such as battery-operated stir boxes, and heating plates. Ho’olana also prepares components to be “field ready” such as drying and packaging TLC plates to resist effects caused by humidity.

The kits perform quantitative analysis by using digital imaging tools to determine quantities and ratios of stabilizers in the propellant. Compared to traditional laboratory TLC processes, the field kits require a much smaller sample size to determine if targeted chemicals are present.

Ho’olana Technologies will add to the growing technology industry in Hawaii. According to Kevin Baptist, chair of Alu Like Enterprises LLC, “Ho’olana Technologies and our manufacturing

plant were located in Hilo to bring economic activity to a community that is economically depressed. Hilo is located on the Big Island of Hawaii, which has a large native Hawaiian population.”

Baptist also noted: “My experience working with the Laboratory’s Industrial Partnerships and Commercialization Office opens up an entire new realm of possibilities for small businesses forming partnerships with government.

“The administrators were helpful and empowering, while the scientists were brilliant and took the time to make sure we thoroughly understood the transferred technology. I definitely want to continue this partnership.”

The company marked its first year in Hilo in March of this year and has just completed its first contract, delivering 50 complete TLC kits to LLNL for research and development for the U.S. Army.

Technical Meeting Calendar

Friday
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INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

“The Evolving Universe of Galaxies from Redshift 3.5 to 1.5,” by Kurt Adelberger, Carnegie Observatories. Noon, Bldg. 319, room 205. Contact: Wil van Breugel, 2-7195, or Sharon Taberna, 3-6290.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

“Detailed Cache Coherence Characterization for Open MP Benchmarks,” by Frank Mueller, North Carolina State University. 11 a.m., Bldg. 451, room 1025 (uncleared area). Contact: Bronis de Supinski, 2-1062, or Leslie Bills, 3-8927.

Tuesday
4

COMPUTATION/LC: MPI TOPICS COLLOQUIUM

“ChaMPlon/Pro: Production-grade Linux Cluster MPI-2 for TCP, IB, Myrinet, and Beyond,”

by Anthony Skjellum and Rossen Dimitrov; MPI Software Technology, Inc. 9 a.m., Bldg. 451, room 1025 (uncleared area). Contact: Terry Jones, 3-9834, trj@llnl.gov.

PHYSICS & ADVANCED TECHNOLOGIES DIRECTORATE-WIDE SEMINAR

“Danger Asteroid Crossing,” by David S. Dearborn, 2 p.m., Bldg. 2128, room 1000 (uncleared

area). Contact: Alan J. Wootton, 2-6533.

Wednesday
5

ENGINEERING CENTER FOR NON-DESTRUCTIVE CHARACTERIZATION

“Development of High Resolution X-Ray Digital Radiography and Computed Tomography Systems at the Department of Physics, University Of Bologna,” by Alessandro Pasini, University of Bologna. 1:30 p.m., Trailer 2128, room 1000. Contact: Ann Tyler, tyler8@llnl.gov, or Debbie Leal, leal1@llnl.gov, to obtain the abstract.

CENTER FOR GLOBAL SECURITY RESEARCH

“The Impact of Culture on Russian Negotiating Behavior,” by Ambassador Lars Vissing, Danish Ambassador to Russia. 10 a.m., Bldg. 132S, room 1784 (formerly the Summit Room) (red area). Contact: Tami Alberto, 2-5969.

Thursday
6

CENTER FOR APPLIED SCIENTIFIC COMPUTING

“Evaluations of MPI as a Programming Model,” by Kim Yates, CASC, LLNL. 3:30 p.m., Bldg. 451, room 1025 (property protection area). Contact: Kim Yates, 4-3642, or David Jefferson 2-0463.

Friday
7

BIOLOGY & BIOTECHNOLOGY RESEARCH PROGRAM

“Applications of Metabonomics in Drug Discovery and Development,” by

Jasna Fejzo, Vertex Pharmaceuticals, Inc., Cambridge, MA. 11 a.m., Bldg 361, room 1155. Contact: Rod Balhorn, 2-6284, or Monique Cosman, 3-1647.

INERTIAL CONFINEMENT FUSION/HEDES PROGRAM

“The Dynamics of the Coherent Structures in the Rayleigh-Taylor Instability,” by Snezhana I. Abarzhi, Center for Turbulence Research, Stanford. 10:30 a.m. – noon, Bldg. 219, room 163. Contact: Bruce Remington, 3-2712, or Louann Arredondo, 2-6710.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

“Computational Models of Cellular Metabolic Fluxes,” by Daniel Segre, Harvard Medical School. 10 a.m., Bldg. 361, room 1140 (property protection area). For more information see URL <http://www.llnl.gov/casc/calendar.shtml>. Contact: Bill Bosl (CASC), 4-5015, or Leslie Bills 3-8927.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

“Shock-Induced Star Formation,” by Chris Fragile, AX Division. Noon, Bldg. 319, room 205. Contact: Wil van Breugel, 2-7195, or Josie Morgado, 3-4188.

THE HOME PAGE



Welcome HOME

The HOME Campaign 2003 came out of the starting blocks in a blaze of color Wednesday. County Supervisor Scott Haggerty fired the starting gun for the Run for HOME. Taking advantage of the unseasonably warm weather, employees browsed the booths in the HOME fair. Employees at Site 300 held their own HOME kick off event. Site 300 pirates (bottom left) from left to right: Sue Byars, Sue Miller, Kristen Dulaney, Kris Pereira and Michelle Thompson get in the Halloween spirit. Sue Steelman, dressed as Betsy Ross (top right), received the award for most patriotic costume. Other costumes included a deviled egg, Uncle Sam, a group of woman dressed up as Rosie the Riveters and a multi-person team walking as the American flag.

LLNL Photos by Jacqueline McBride/Newsline



Trevor Wiley (above) was the first to cross the finish line, completing the course in 8 minutes 57 seconds.



Site 300 photo by Ruth Dominiak





CLASSIFIED ADS

See complete classified ad listings at
<https://www-ais.llnl.gov/newsline/ads/>

AUTOMOBILES

2001 - Honda Odyssey LX, Silver, Keyless Entry, Roof rack, Rear A/C, 39k miles, \$20,800 925-373-6841

1992 - HONDA ACCORD EX 2-Door COUPE, Black, 89K miles, \$4200 925-373-6814

1995 - Subaru LS wagon. AWD, New Tires & Brakes, Fresh Smog, Alpine CD Stereo, Loaded, Great Shape! 169kmi. \$550 under Bluebook. \$4500 510-569-0285

1997 - Honda CRV,4 wheel drive,fully loaded,roof rack,cd player,99,800 miles, excel cond, orig. owner,\$9200 or B/O 925-556-0522

1990 - Dodge Caravan LE, V6 3.0 Liter, 133k miles, AC,Pwr ..., AM/FM/C, Rack, T-Htch, One Ownr, Good cond, well maintd. \$2200 obo. 925-455-5209

1966 - Ford Mustang. MUST SELL MY other CHILD. Good body, interior mostly new. Needs engine work. \$2000 OBO. 925-784-6682

1996 - Honda Prelude, Excellent Condition, 5-speed, new CD player, new upholster, moon roof. 104K miles. Priced below low Blue Book. \$8200. 925-484-2217

1985 - Chevy Monte Carlo CL 77,000 miles, looks & runs good 209-402-6245

2003 - Chevrolet Cavalier, LS Sport Sedan, Automatic, Silver w/Grey interior, Premium Wheels, AC,PW,PL,ABS,CD. Eccellent condition. 21K miles. \$11,250. 925-829-4946

1997 - 1997 Toyota Corolla,30k miles, pristine condition, \$7500 925-462-4022

1983 - Chevy Blazer--6 inch lift with a fresh 350 target motor. 35 inch tires, Edelbrock--Rancho Dual Exhaust. Will not smog. AS IS. \$2,000 OBO. 209-483-2293

1988 - Camry. Red, 184k, AC, PS, cruise, 4-spd AT. Looks good, runs great, excellent recent smog, orig. owner. \$1800 925-846-3199

1998 - Toyota Corolla, 59,000 miles, great condition. \$6,000. 925-931-1240

2000 - AUDI A4 1.8T Quattro, slv/chrc, orig. owner, all service records, excellent condition, 74K mi., \$13.9K, must sell 510-594-1693

1994 - BMW 740i; Very good condition; 103K miles. White with grey interior. Runs great; well maintained. \$10,500 or best offer. 925-292-0231

1999 - DODGE GRAND CARAVAN SE. 133k miles,Pwr doors/windows, 2nd sliding door, AC, Cruise Control, AM/FM/Cassette/CD \$7400 209-480-2486

2000 - Chrysler LHS 4D Sedan, Gold, loaded, mint condition, 63k miles, 100k mile transferable warranty, \$12,500 209-836-9252

1999 - Ford Explorer 4x4 XLT,V6, 97K miles, leather, power, tow, gold/tan, roof rack, run boards,excellent car, too small for growing family. \$7,000 OBO. 925-938-8720

1989 - Mercury Cougar LS, 3.8L V6, 4-spd auto, 195K miles. Engine runs great. Needs AC clutch. Everything else ok. CC,PS,PD,PL, PW,PM, PSeats,6-CHG-CD. \$1000. 925-634-3756

AUTOMOBILE ACCESSORIES

Porsche 914 Wheel and tire. Excellent condition. \$75 / obo 925-516-2446

Aluminum Wheels, 4 Each, 16X7, 4 Lug X 4-1/4 BC, OEM Ford Focus, Contour, Escort, Cougar and Mystique, Perfect Condition \$75. 925-443-3970

BICYCLES

Gary Fisher HooKooEKoo Mountain Bike, Size 16.75in/42.5cm Rock Shox Quadra 21R. Shimano XTR rear derailer, Thompson Elite seat post, Nice Bike \$150. 917-974-6317

Tag-A-long bike attachment. Excellent condition. Fits any size bike.\$75.00 925-838-0664

BOATS

Fishing Boat 1989 17 ft. 50hp outboard excellent condition with trailer,trolling motor, fully equipped, must sell \$4,000 or best offer. 209-239-5730

Achilles inflatable with 30HP Evinrude outboard, brand new custom trailer, too many extras to list, excellent condition \$3,550 OBO 209-599-1059

97 Yamaha 760 waverunner with Trailer,3-seater, new engine. \$4000/OBO. 85 Kaw. stand-up jetski, spring pole, runs excellent \$850/OBO 925-449-5734

1977 Tahiti El Day Cruiser on a Road Runner

Trailer w/out engine. Berkeley jet needs rebuild. No reasonable offer refused. 209-483-2293

ELECTRONIC EQUIPMENT

Microsoft Windows XP Home edition, full version. Genuine, legal and unregistered in box. \$150. 925-600-1817

Apple LaserWriter IINT, works with MAC and PC with WIN98. Low page count and runs great. \$50 925-361-7111

Epson LQ-850 dot matrix printer-(Make an offer). Sony speakers 12ii woofers, with mid range and tweeters. \$100.00 209-836-1506

Computer Desk: Medium size oak corner unit. Pix avail. 76 in. X 50 in., keybd drawer, 3 reg dwnr, 1 file dwnr, 1 shelf. New \$999, asking \$300. 925-634-8223

Mac Performa 6400, G3 350mhz upgrade,128m RAM, CD-ROM, ethernet, OS9 system, AppleWorks software, 15 in. Sony monitor. Great for the kids! \$225 OBO. 925-648-0870

Microsoft wireless networking equipment for home networking, includes manual, installation CD, etc. \$40/OBO. 925-485-1988

Fax/Copy/Print/Scan/Color - Cannon Multipass F50. Brand New in box. Sell for \$250. 925-373-7664

GIVEAWAY

Free 30 gallon electric hotwater heater. Its short to fit under a counter. You haul. 209-667-2365

Free bedliner for Ford full size longbed. 209-824-2177

Free ginger and white rock located in Fremont. U haul. 510-792-1538

Camper and Carpet pad- Cab over camper for full size pickup, full bed, water tight. Carpet pad for med. size room. 925-455-1355

Remodeling, left over kitchen cabinets. Good for garage. You haul. 925-846-3548

Tan/Brown Couch. Good condition. Seats 3. Cloth cushions. 925-449-9104

Hog, 400 plus lbs, pet or bbq u-haul 925-454-0496

HOUSEHOLD

Amana Refrig. One year old, runs great, Energy Star. Paid 750.00 asking 400.00. 510-537-7222

Bruener sofabad and love seat matched set, sofabad opens up to queen-size bed, very attractive and in excellent condition. \$600 for both. 925-361-7111

Modular Office Set. Includes: Computer Desk, Lateral File, Drawer Unit, and Hutch. Solid Oak and Oak Ply. \$3,600 new, asking \$2,000 or B.O. 925-455-1730

CA King Mattress Set, Simmons Nighttime Refuge . Only 5 months old. \$1100 OBO. 209-823-0234

Lava lamp, purple, new light bulb. Works great. \$10. 925-846-3653

Twin platform bed frame (birch veneer)and mattress, \$50. 925-947-6630

Wood bunk beds. Used three years. Very good condition. \$250 209-667-2365

Oak China Hutch, 50 X 78, leaded glass, new \$1.5K/\$500 OBO; Blk leather office chair, new \$200/\$60 OBO; two metal lamps, new \$130/???. Pix avail. 925-634-8223

Oasis water cooler with working hot and cold water. \$75.00. 925-836-1506

Estate/Garage Sale. Saturday Nov.1 only, 9am-3pm. 2680 Marina Ave., Livermore, off Arroyo. Antiques, household, collectibles. 925-455-4846

Very nice Kenmore washing machine, heavy duty, large tub, 10 years old, works great, no rust, \$50 or best offer. 925-449-7661

Shower stall - corner unit, 38 in., still in box, 1/2 price, \$150. 925-455-1355

Free standing wood stove. Resolute brand. Black with double doors that have small glass panes. Modern construction. \$375/OBO. 925-245-1114

Kenmore Washer and Dryer. Good condition. \$50 each. 925-449-1724

GE diswasher, white, like new, \$100 or BO; Queen size sleigh bed, oak, excellent condition, paid \$1500, asking \$600 or BO. 925-373-2830

Coffee table with slat wood top and black wrought iron legs, 24x60 inches. \$15 925-455-8609

Brass five arm arched floor lamp with five large bulbs. \$35 925-455-8609

Black leather sofa. 2 leather recliners, excellent condition. Make offer. 925-899-9675

Two-drawer metal filing cabinet, white, in very good condition. \$15.00. Pick up in Walnut Creek. 925-625-5938

Hanging crystal lamp. Six sided, approximately 11 in. x 21 in. New \$125, Will sell for \$50. 925-447-7242

Dining rm table. Oak, w/ two leaves that can be removed, 8 chairs, \$150.00, California King mattress, Box Spring 209-833-6443

NYLON SUNSHADE---wht w/ grn stripes. Col-lapsable and easy to store. Great in summer. About 10 ft sq. Like New (only used once). \$50.00 925-454-8874

Just in time for X-mas, 6 month old Pottery Barn bedroom furniture.Twin headboard, desk,chair, lamp,and dresser. A moving sacrifice at \$1800.00. 925-516-8925

Entertainment Center, Cherry,4 1/2 ft wide x 4 ft high, paid \$800.00, \$300.00, O.B.O. Executive Desk, \$50.00 925-449-8806

Mahogany Furniture: DR set and hutch \$1700. Bombay Company CD Caddy \$30 ea or 3/\$75. Curio Cabinets \$600 ea or 2/\$1000. Or best offer. 925-449-2008

MISCELLANEOUS

Craftsman push mower with grass catcher, like new. \$75. 925-600-1817.

Sears heavyduty sander (\$30), scroll saw (\$30), induction tune-up dwell meter, induction timing light (\$45 both) 925-361-7111

Monitor, color 17 inch Sony Trinitron Multiscan 200ES. Excellent condition. \$75. 925-648-0671

TORO RIDING MOWER, 11 HP, 32 inch mowing deck Electric start Good condition Runs strong \$450 OBO 209-836-3481

Hot water solar system, complete pump and plumbing and two 4-x-8 panels. \$1250. 925-447-5015

FACE VALUE - Simon & Garfunkel HP Pavilion, San Jose - Tues Nov 5, 2003 8pm. 2 tickets in Sec 101 very close to stage. 925-580-9694

John Riley golf clubs, assorted scuba equipment, too much to list. 209-599-1059

YARD SALE 2628 Kennedy St, Livermore 8 to 3 Friday Nov 7, plants, baskets, clothes, LOTS MORE. COME SEE 925-447-6192

FireView Wood Heater, Model 360. With 12 x 24 glass and 20 sq-ft of radiant heating surface. Blower modified for quite operation. \$175.00 209-836-1506

Solid oak desk, keyboard roll-out(\$75), 4ft oak bookshelf (\$65), oak chest(\$45). All matching pieces in medium oak. Nice. 530-682-7758

Samsonite Luggage (2 pieces), 26in.x20in.x7in., w/wheels and pull handle, 22in.x17in.x6in., excellent condition, dark blue,keys, \$60 for both 925-443-1279

Estate Sale: Antique Oak Executive size Desk w/chair and original glass top, \$100. 510-357-5982

Antique Wood Framed Windows, 120 years old, Beautiful wavy glass, \$25.00 each 925-447-6670

Various 6 foot artificial silk trees. \$35 each 925-455-8609

VHS tapes, 120 & 160, all recorded on once. 100s of them. 111-222-3456

ELECTRIC SPACE HEATER---heavy duty. Usable indoors. \$25.00 925-454-8874

Area Rug, 12ft x 9 ft.,Thick wool, floral design,very good shape, paid \$5000.00, \$300, O.B.O. 925-449-8806

CARDBOARD BOXES, STURDY for moving/storage: 40 for \$50, Livermore 925-447-7070

Fierwood, mixed hard wood, \$180/crd delivered, 925 447 8557

MOTORCYCLES

1983 - Yamaha - 750cc, good running Cond. 26k mi \$1100 209-239-6248

1985 - Kawasaki GPZ550 Excellent condition, low miles, runs great! \$1,500. 209-599-1059

2000 - Harley Ultra Elect. Glide Classic (FLHTCUI) 2T Blue stage one Kit. New Brakes and Rear Tire, Many Extras, \$18,000.00 or OBO. 209-576-2888

1984 - Honda Magna, 1100cc. 14k miles, WndShld, Black. Very pretty, Runs good but has eltrc short. \$800 obo 925-455-5209

2002 - 2002 F650GSA, 11814 miles; Dealer svc. just completed, almost new tires. \$6000 OBO. 209-833-3758

1999 - Honda xr 100 -- daughter's bike, super-trap exhaust \$1500.00 925-516-6552

2000 - YZF 426 dirt bike, very low hours, needs minor work, call for details, \$2,500 FIRM 925-519-1677

2002 - Harley Davidson Fatboy, Black, only 1000mi, Harley Fat Tire Kit, Samson Ripsaw Pipes, Leather Saddle Bags, Alarm. \$19,000 OBO 925-413-6275

MUSIC INSTRUMENTS

Suzuki violin, 1/4 size, Wolf violin headrest (1/2 size), Violin Strings, all like new. Make offer 925-361-7111

Antique player piano w/piano bench. \$400 or BO. 209-537-2961

PETS & SUPPLIES

Dachshund mini,AKC,8wks,2nd shots, Silver & Black Dapples,Piebalds, and Black & Tan, 4 females, 2 males \$400-600 Cash Only. 925-513-1786

Basset Hound puppies 4 weeks old. 4 males, 3 females, AKC papers will be ready to go by 11/20/03. Asking 500 209-914-4085

RECREATION EQUIPMENT

Sporting equipment for sale too much to list! Scuba Regulators, Dry Suit, Buoyancy compensators, full face masks, navigation boards, etc. 209-599-1059

16in Dakota Roping Saddle, like new. \$475 15in Billy Cook Barrel Saddle \$400 209-824-2177

Orbitrek elliptical trainer. Like new! \$89 firm (bought for \$199+). Get in shape for the holidays! 209-814-6866

Basketball hoop, adjustable height, free standing, \$50.00 925-449-8806

RIDESHARING

Express your commute, call 2-RIDE for more information or visit <http://www-r.llnl.gov/tsmv>.

BERKELEY - Rider/driver needed to complete a four person carpool. Leave Berkeley 7 am. Leave LLNL 4:40 pm. 510-524-8332, ext. 2-5949

Danville - looking for driver/rider to complete a four person carpool in the Diablo Rd. area. Work hours 8:15-5pm. 925-831-1569, ext. 2-9858

San Jose & Fremont - Space is available from San Jose and Fremont areas. Work hours: 7:30-4:30. Call 408-238-1909, ext. 3-3057

MANTECA - Rider/Driver needed 7:30AM-4:00PM work hours. 209-823-5593, ext. 3-8539

Tracy - ACE train senior ticket. Tracy to Vasco Rd. Cost \$55.80 will sell for \$45.00 or BO 209-832-5463, ext. 2-7401

Modesto Park and Ride @Mall - Immediate opening in luxury vanpool, captain seats, reading lights, cel phone avail 8-4:45 ridership-based fares, 209-544-2236, ext. 3-3194

PATTERSON - Vanpool has seats available for 7:30-4:00 shift. Guaranteed Ride Home & Pre-Tax Transportation Programs available. Fare based on # of riders. 209-892-2118, ext. 2-9502

SHARED HOUSING

Modesto - Need organized non-smoking roommate. 3 Bed 2 Bath home. Deposit required. \$500 per mo. plus utilities. 209-522-2212

Livermore - furnished room for rent. Clean/quiet. \$550.00/month. Share utilities 1/3. Mature adult. No pets/no smoking. Deposit required. 925-449-1128

Livermore - Room for Rent \$550, plus 1/3 utilities, 1 mile to LLNL. No smoking/pets 925-989-6138

Livermore - Room available in beautiful 3300 sq ft Livermore home. Hot tub and pool. Your furniture or ours. 10 min. from lab. Must see! \$900/mo. 925-899-9675

SERVICES

Haunted House- Halloween night 5132 Diane ln. Livermore. Open until 10:00 pm. 925-373-9435

Wedding Photography: 23 yrs exp. Medium format cameras used. You keep all prints and

negatives. Book now for 04. 925-829-1474

TUTORING in high school and college math and chemistry. 925-443-2095

KITCHEN CABINETS Will quote new kitchen cabinets for remodel, upgrade, etc. any size kitchen. Norcraft Cabinets, great prices. 925-413-1897

HOLIDAY Boutique in Brentwood, Sat 11/01/03, from 10:00am to 4:00pm, hand painted items, Mailboxes, Garden Rocks, Wine Glasses & more. call for info 925-634-8134

TO TRADE

Antique dining room set, built 1927, table w/2 built in leaves, 6ft. Buffet, China Hutch, 6 chairs, \$2400.00. 510-357-5982

TRUCKS & TRAILERS

1990 - Snug Top camper shell for Ford full size longbed. Dark brown metalflake in color. \$200 209-824-2177

1988 - F-800 Ford 20ft. box van, runs great, passes smog. 4K lb Lift gate, \$3800.00 Great for moving or storing. 925-513-4488

1994 - Ford F150 pick up, Air, CD Player, Dual gas tanks, 60k miles. Clean Excellent condition \$6,600.00 510-793-4172

1996 - Ford F-250 Power Stroke Diesel Cab Plus long bed, 101K mi.,A/T, A/C, P/S, C/T, T/W, P/W, new tires,\$13,500. 925-525-4222

1994 - Chevy Silverado asking \$7000 OBO. 209-649-3771

2001 - Dodge Ram 1500 Quad Cab. V8, 4x4, tow pkg, all power. 62K miles. Priced below KBB by \$2k. Great condition. A must see at \$16,000.00 925-829-5126

1994 - Dodge Ram 1500 4x4 w/camper shell, 5.9L V8, Auto, K&N Intake, lift kit, sunroof, custom stereo, TV/VCR and many extras. \$7250 or b/o 925-321-1500

Bedliner for 98 or similar Dodge full-size pickup. In great shape. \$75 925-625-5938

2001 - Dodge/SB 4X4 w/4in. lift, over sized tires, ext. cab/4 door, sound sys. custom grill,60K, excellent cond! call for more details, 17K OBO 925-519-1677

VACATION RENTALS

SQUAW VALLEY/TAHOE - Olympic Village Inn. 1 bedroom condo available Thanksgiving week (11/23-29). Sleeps 4 comfortably, fully furnished, ski slopes. Make offer 925-361-7111

Arnold area - below Bear Valley ski resort on hwy. 4. 4 bdrm. modern mountain home. Christmas still open. Great fishing, skiing, hiking. 925-245-1114

Cute beach cottage in Santa Cruz. 2 bedr, 2 bath, sleeps 7-8. 4 blks to beach. Fully equipped kitchen, spa. 925-245-1114

SOUTH LAKE TAHOE - 3 Bedroom 2 bath Chalet, newly remodeled, nicely furnished, all amenities, close to all skiing. RESERVE NOW FOR HOLIDAYS! 209-599-4644

South Lake Tahoe - Great family home to rent, four bedrooms plus kids loft all amenities. No smoking or pets mid week rates 925-484-3162

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful two-island view, oceanside pool, and BBQs. Low LLNL rates for year-round reservations. 925-449-0761

WANTED

1-2 bdrm rental in Brentwood/Oakley area up to \$1,000/mo, have pets. Need by Jan 1. 925-634-8162

WANTED! - Will take old metal/steel/cast bathtubs off your hands, from you remodel projects, to be used for livestock water tanks. 925-449-0865

Wanted: Cello, bow, and accessories. 925-455-4970

WANTED: 4 - 15 or 16 inch 5-lug styled wheels (no wheel covers) for GM auto, need to be able to hold a 60 series tire. 925-371-8111

Clean pink lids from Yoplait yogurt containers to send in for donations to breast cancer research. 209-838-6105

Services and merchandise listed in *Newsline* are not guaranteed. It is up to the buyer to scrutinize services purchased.

Due to space limitations, *Newsline* may withhold ads that have already run. They will still

AROUND THE LAB



TELLER

Continued from page 1

rity, died in his Stanford home Sept. 9, at the age of 95.

Due to the large number of Dr. Teller's colleagues and friends who are expected to attend, the event is by invitation only. Laboratory employees are invited to watch the commemoration, which will be broadcast live on Lab TV Channel 2.

Employees may also go to the auditorium in Bldg. 543 or the Poseidon room in Bldg 111 (L- or Q-clearance needed) to view the event on a large screen. The Discovery Center auditorium (Trailer 6525) will also be open for large screen viewing. Seating is on a first-come, first served basis at all venues. Videotapes of the event will also be made available for loan from department offices.

Elected officials and international dignitaries, longtime colleagues, friends and family will pay tribute to Teller during the ceremony. Speakers include Deputy Secretary of Energy Kyle McSlarrow; Rep. Ellen Tauscher and Andras Simonyi, the ambassador of Hungary.

University of California President Robert Dynes, Hoover Institution Director John Raisian, UC Board of Regents President John Moores and former Lab Director John Foster also will pay tribute. Video tributes from colleagues throughout the nation have also been recorded for the event.

Laboratory Director Michael Anastasio will preside over the ceremony, which will include a video reflections of Dr. Teller's life, musical recitals, readings of Teller's poetry and a special Laboratory color guard presentation. The ceremony will close with remarks by Teller's children, Wendy and Paul.

Because parts of the parking area near Bldg. 123 have been blocked off in preparation for the ceremony, employees are advised to seek additional parking in the A-1, Z-1 and Z-2 lots, in the southwest corner of the Lab.

This is a program for the Edward Teller commemoration to be held Monday. The ceremony will be broadcast live on Lab TV Channel 2 for the benefit of all employees.

COMMEMORATION FOR DR. EDWARD TELLER

Monday, November 3, 2003

2:00 p.m.

Entrance of the Laboratory Color Guard
Ludwig van Beethoven, Piano Trio, Op. 97, "Archduke," 1st Movement

WELCOME

Michael Anastasio, Director, Lawrence Livermore National Laboratory

Video Reflection of Dr. Teller's life

TRIBUTE

Andras Simonyi, Ambassador of Hungary

Video remarks from old friends

POETRY READING

Astro Teller, grandson of Edward Teller

Ludwig van Beethoven, Sonata No. 8, Op. 13, "Pathetique," 2nd Movement

Video remarks from colleagues

TRIBUTES

Lowell Wood, Senior Scientist, Lawrence Livermore National Laboratory

John Moores, Chairman, University of California Board of Regents
Robert Dynes, President, University of California

Kyle McSlarrow, Deputy Secretary, Department of Energy

Ellen Tauscher, United States House of Representatives, 10th District
Video remarks by Duncan Hunter, United States House of Representative, 52nd District

TRIBUTE

John Raisian, Director, Hoover Institution
Video remarks by Hoover Institution Fellows

POETRY READING

Edward Turano, Physicist, Lawrence Livermore National Laboratory

Ludwig van Beethoven, Piano Trio, Op. 97, "Archduke," 4th Movement

Video remarks from former Laboratory Directors

TRIBUTE

John Foster, former Director, Lawrence Livermore National Laboratory

KEYNOTE TRIBUTE

George Shultz, former Secretary of State

REMARKS

Wendy & Paul Teller

CLOSING TRIBUTE

Michael Anastasio

RECEPTION

TARTER

Continued from page 1

Tarter will officially receive his award, a certificate and rosette, in February at the annual AAAS gathering in Seattle.

"I am honored to be named a fellow of AAAS," Tarter said. "However, this award is really one that goes to all of the people in the Laboratory who worked so hard and effectively to create the Stockpile Stewardship Program."

Tarter served as director of LLNL from 1994 to 2002, the second longest tenure in the history of the Lab. During those years, Tarter was instrumental in leading the Laboratory out of its Cold War missions and into one of continued national security through the science-based Stockpile Stewardship Program.

Tarter's rank of Fellow falls under the AAAS section on Societal Impacts of Science and Engineering.

Each year, a group of peers selects AAAS members to become fellows. Awarded to 348 members this year, these researchers have been

elevated to this rank because of their efforts to advance science or foster applications that are deemed scientifically or socially distinguished.

Founded in 1848, AAAS has worked to advance science for human well-being through its projects, programs, and publications, in the areas of science policy, science education and international scientific cooperation. AAAS and its journal, *Science*, report nearly 140,000 individual and institutional subscribers, plus 272 affiliated organizations in more than 130 countries, serving a total of 10 million individ-

Dr. Jekyll and Mrs. Hyde: Life of the tarantula wasp

Fall is an excellent time to catch a glimpse of the hairy beasts of the spider world at Site 300 and in grasslands around the Livermore area.

The tarantula is the largest of the spiders found in the region, with a body up to two inches in length and legs three to four inches long. The mating season for the tarantula begins in October and continues until mid-November. During this time, mature males can be seen roaming across the roads and grasslands at Site 300 searching for a mate. The female tarantulas do not roam and will often occupy the same hole or rock for many months or even years at a time.

Unlike most spiders, tarantulas do not spin webs to catch their prey, which consists of small insects and sometimes lizards. Instead, tarantulas chase their prey on the ground and live underground in burrows. Normally, females can live up to 25 years or more, while the males are not quite so lucky, often being eaten by the females after mating. Some tarantulas, however, meet a far more gruesome death than cannibalism. Much like the plot of a bad horror movie, some unlucky tarantulas become a victim of the “body snatchers” of the insect world – the parasitic tarantula wasp.

Tarantula wasps (*Pepsis spp.*) are parasitic insects that use tarantulas as live hosts, or food for their developing larvae. The brightness of the orange-red colored wings of this two-inch-long, black wasp is a warning to other creatures, including humans, that it is dangerous and should be avoided. Its sting is the most painful of any North American insect (although it is less poisonous to humans than a honeybee). Only the female tarantula



By Megan Cook



MICHAEL VAN HATTEM/EPD

Tarantula wasp (right) and its innocent victim, the tarantula (above). The bright coloration of this wasp gives warning that it may be wise to steer clear of it. The tarantula wasp can deliver the most painful sting of any North American insect and its young eat tarantulas alive.

wasps can sting but its use of that sting has made the tarantula wasp the tarantula’s fiercest and most dreaded enemy. Ironically, even though they look more frightening than the attractive tarantula wasp, tarantulas are

quite harmless to people and will rarely bite unless handled roughly.

When a female tarantula wasp is ready to lay her eggs, she uses her sense of smell to find a tarantula. She then stings the tarantula, which permanently paralyzes it. The wasp, despite being half its size, drags the tarantula into a burrow, lays a single egg on its abdomen and then seals the burrow. Once the wasp larva hatches, it feeds on the juices of the still-living but paralyzed tarantula until the larva reaches its last molt stage. Then the new adult wasp tears open the tarantula and feasts on the organs of the tarantula. This last act spells the end for the tarantula. After this gruesome beginning to life, the tarantula wasp lives the rest of its life as a peaceful nectar eater...until it is once again time to reproduce. This is when the female tarantula wasp makes its transition from Dr. Jekyll to Mrs. Hyde, searching the grasslands for its next victim.



MOU

Continued from page 1

lowship Program at Livermore for Air Force officers holding the rank of major and above as well as for senior civilians GS-14 and above in nuclear science and engineering career fields. “The purpose is to revitalize the Air Force officers’ nuclear career path, while giving them first-hand insight and experience into Livermore’s nuclear technologies program,” said Bill Mullins, U.S. Air Force associate director of Nuclear and Counterproliferation.

The program is designed so participants can earn master’s degrees while simultaneously receiving Professional Military Education credit. This new “Intermediate and Senior Development Education Program” was recently instituted by General John Jumper, the Air Force Chief of Staff.

Beginning in September 2004, this 21-month program will combine specific assignments in the Lab’s Defense and Nuclear Technologies program with concurrent enrollment in the U.C. Davis Department of Applied Science at Livermore.

Air Force students will be assigned a Livermore mentor from the DNT’s scientific staff for the assignment. At least one new officer or civilian will begin the 21-month program each year. While the program initially will focus toward nuclear programs and technologies, future plans may include additional students who can concentrate on the scientific areas related to counterproliferation, an area where the Lab also has considerable expertise.



JACQUELINE MCBRIDE/NEWSLINE

Lab Director Michael Anastasio and Air Force Brig. Gen. Robert L. Smolen after signing an Memorandum of Understanding.

Air Force students will be placed in DNT or in Laboratory departments that support DNT to ensure that the students will be involved in weapons-program-related activities, such as Engineering, Chemistry, and Computations. Technical assignments and mentoring also will be the responsibility of DNT. The interaction between students and the Livermore staff will be of great mutual benefit for the future.

The Lab’s National Security Office will provide oversight for the program, while the Science and Technology Education Program or STEP will orchestrate the master’s degree elements.

Both the Laboratory and the Air Force will assume some of the respective costs associated with the program, but there will be no exchange of funds between the two organizations. Everyone expects this partner-

ship to pay dividends for our nation’s future, in nuclear and counterproliferation support of the global war on terrorism.



Newsline
UC-LLNL
PO Box 808, L-797
Livermore, CA 94551-0808